Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (currently amended) A method of transplanting hematopoietic cells ~~transplantation~~ comprising the steps of:

(a) obtaining hematopoietic cells, to be transplanted from a donor;

(b) providing said hematopoietic cells *ex vivo* with conditions for cell proliferation and, at the same time, ~~for reducing a capacity of said cells in utilizing copper,~~ with a transition metal chelator having an affinity for copper,

wherein said chelator inhibits differentiation of said cells,

thereby expanding ~~a population enriched for CD_{34}+~~ said cells, ~~while at the same time, inhibiting differentiation of said cells~~; and

(c) transplanting said cells to a patient.

Claim 2 (original): The method of claim 1, wherein said donor and said patient are a single individual.

Claim 3 (previously canceled)

Claim 4 (currently amended): The method of claim 1, wherein ~~obtaining~~ said hematopoietic cells ~~further includes enriching said cells~~ are enriched for stem cells.

Claim 5 (currently amended): The method of claim 1, wherein ~~obtaining~~ said hematopoietic cells ~~further includes enriching said cells~~ are enriched for progenitor cells.

Claim 6 (cancelled)

Claim 7. (currently amended): The method of claim ~~6~~ 1, wherein said transition metal chelator is tetraethylenepentamine.

Claim 8 (currently amended) The method of claim 1, wherein providing the cells with conditions for cell proliferation includes providing the cells with nutrients and a cytokine or cytokines.

Claim 9 (currently amended) The method of claim 8, wherein said cytokine or cytokines ~~are~~ is an early acting cytokine or cytokines.

Claim 10 (currently amended) The method of claim 9, wherein said early acting cytokine or cytokines ~~are~~ is a stem cell factor.

Claim 11 (currently amended): The method of claim 8, wherein said cytokine or cytokines ~~are~~ is a late acting cytokine or cytokines.

Claim 12 (currently amended): The method of claim 11, wherein said late acting cytokine or cytokines ~~are~~ is a granulocyte/macrophage colony stimulating factor.

Claim 13 (previously amended): The method of claim 1, wherein said cells are derived from neonatal umbilical cord blood.

Claim 14 (previously cancelled)

Claim 15 (original): The method of claim 1, wherein said cells are selected from the group consisting of non-differentiated stem cells and committed progenitor cells.

Claims 16-36 (previously cancelled)

Claim 37 (currently amended): A method of adoptive immunotherapy comprising the steps of:

(a) obtaining progenitor hematopoietic cells from a patient;

(b) providing said hematopoietic cells *ex vivo* with conditions for cell proliferation and, at the same time, ~~for reducing a capacity of said cells in utilizing copper~~, with

a transition metal chelator having an affinity for copper, wherein said conditions for cell proliferation include providing said cell with nutrients and early acting cytokines, thereby expanding ~~a population enriched for $CD_{34}+$~~ said cells, while at the same time, inhibiting differentiation of said cells; and

(c) transplanting said cells to a patient.

Claim 38 (cancelled)

Claim 39 (currently amended): The method of claim ~~38~~ 37, wherein said transition metal chelator is tetraethylenepentamine.

Claim 40 (cancelled)

Claim 41 (cancelled)

Claim 42 (currently amended): The method of claim 41, wherein said early acting cytokine or cytokines ~~are~~ is a stem cell factor.

Claim 43 (currently amended): The method of claim ~~40~~ 37, wherein said conditions for proliferation further comprise providing the cells with a ~~cytokines are~~ late acting cytokine or cytokines.

Claim 44 (currently amended): The method of claim ~~42~~ 43, wherein said late acting cytokine or cytokines ~~are~~ is a granulocyte/macrophage colony stimulating factor.

Claim 45 (previously amended): The method of claim 37, wherein said cells are derived from neonatal umbilical cord blood.

Claim 46 (previously cancelled)

Claim 47 (original): The method of claim 37, wherein said cells are selected from the group consisting of non-differentiated stem cells and committed progenitor cells.

Claim 48 (newly added): The method of claim 1, wherein said hematopoietic cells are $CD34^+$ cells.

Claim 49 (newly added): The method of claim 37, wherein said hematopoietic cells are $CD34^+$ cells.

Claim 50 (newly added): The method of claim 1, wherein said hematopoietic cells are selected from the group consisting of early hematopoietic cells and hematopoietic progenitor cells.

Claim 51 (newly added): The method of claim 37, wherein said hematopoietic cells are selected from the group consisting of early hematopoietic cells and hematopoietic progenitor cells.

Claim 52 (newly added): The method of claim 1, wherein said transition metal chelator concentration is about 0.1 μM to about 100 mM.

Claim 53 (newly added): The method of claim 52, wherein said transition metal chelator concentration is about 4 μM to about 50 mM.

Claim 54 (newly added): The method of claim 53, wherein said transition metal chelator concentration is about 5 μM to about 40 mM.

Claim 55 (newly added): The method of claim 37, wherein said transition metal chelator concentration is about 0.1 μM to about 100 mM.

Claim 56 (newly added): The method of claim 55, wherein said transition metal chelator concentration is about 4 μM to about 50 mM.

Claim 57 (newly added): The method of claim 56, wherein said transition metal chelator concentration is about 5 μM to about 40 mM.